Claims

1. A method for introducing dsRNA into *C.elegans*, comprising

feeding to *C.elegans* a micro-organism expressing said dsRNA.

2. A method for introducing a DNA that encodes and is capable of producing dsRNA into *C. elegans*, comprising

feeding to *C. elegans* a micro-organism comprising said DNA that encodes and is capable of producing dsRNA.

3. A method according to claim 2, in which said DNA is in the form of an expression vector.

4. A method according to claim 3, in which said expression vector comprises a promoter or promoters oriented relative to a DNA sequence such that the promoter or promoters initiate transcription of said DNA sequence to double stranded RNA upon binding of a transcription factor to said promoter or promoters.

5. A method according to claim 4, in which said expression vector comprises two identical promoters flanking said DNA sequence.

6. A method according to claim 4, in which said expression vector comprises said DNA sequence in a sense and an antisense orientation relative to said promoter or promoters.

7. A method according to claim 4, in which said transcription factor is a phage polymerase.

8. A method according to claim 7, in which said promoter(s) is/are selected from the group consisting of T7, T3 and SP6 promoter(s).

9. A method according to claim 4, in which said micro-organism is adapted to express said transcription factor.

10. A method according to claim 9, in which said transcription factor is T7 polymerase.

11. A method according to claim 4, in which said *C.elegans* is adapted to express said transcription factor.

12. A method according to claim 11, in which said transcription factor is T7 polymerase.

13. A method for down-regulating the expression of a gene of interest in *C.elegans*, comprising

feeding *C. elegans* with a micro-organism that expresses dsRNA corresponding to the gene of interest.

14. A method for down-regulating the expression of a gene of interest in *C. elegans*, comprising

feeding *C. elegans* with a micro-organism that comprises DNA that encodes and is capable of expressing dsRNA corresponding to the gene of interest in *C. elegans*.

15. A method according to claim 14, in which said DNA that encodes and is capable of expressing dsRNA corresponding to

the gene of interest is in the form of an expression vector that comprises a DNA sequence corresponding to the gene of interest.

16. A method according to claim 15, in which said expression vector comprises a promoter or promoters oriented relative to said DNA sequence such that the promoter or promoters initiate transcription of said DNA sequence to double stranded RNA upon binding of a transcription factor to said promoter or promoters.

17. A method according to claim 16, in which said expression vector comprises two identical promoters flanking said DNA sequence.

18. A method according to claim 16, in which said expression vector comprises said DNA sequence in a sense and an antisense orientation relative to said promoter or promoters.

19. A method according to claim 16, in which said transcription factor is a phage polymerase.

20. A method according to claim 19, in which said promoter(s) is/are selected from the group consisting of T7, T3 and SP6 promoter(s).

21. A method according to claim 16, in which said micro-organism is adapted to express said transcription factor.

22. A method according to claim 21, in which said transcription factor is T7 polymerase.

23. A method according to claim 16, in which said *C. elegans* is adapted to express said transcription factor.

24. A method according to claim 23, in which said transcription factor is T7 polymerase.

25. A method according to any of claims 1, 2, 13 or 14, in which the micro-organism is a bacterium.

26. A method according to claim 25, in which the bacterium is *E. coli*.

27. A method according to claim 26, in which the *E. coli* is a RNAse III negative strain.

28. A method according to any of claims 1, 2, 13 or 14, in which the *C. elegans* is DNAse deficient.

29. A method according to claim 28, in which the DNAse deficient *C. elegans* is a nuc-1 mutant.

30. A micro-organism, comprising an expression vector that encodes and is capable of producing dsRNA, in which said expression vector comprises a promoter or promoters oriented relative to a DNA sequence such that the promoter or promoters initiate transcription of said DNA sequence to double stranded RNA upon binding of a transcription factor to said promoter or promoters.

31. A micro-organism according to claim 30, in which said expression vector comprises two identical promoters flanking said DNA sequence.

32. A micro-organism according to claim 30, in which said expression vector comprises said DNA sequence in a sense and an antisense orientation relative to said promoter or promoters.

33. A micro-organism according to claim 30, in which said transcription factor is a phage polymerase.

34. A micro-organism according to claim 33, in which said promoter(s) is/are selected from the group consisting of T7, T3 and SP6 promoter(s).

35. A micro-organism according to claim 30, wherein said micro-organism is adapted to express said transcription factor.

36. A micro-organism according to claim 35, wherein said transcription factor is T7 polymerase.

37. A micro-organism according to claim 30, in which said DNA sequence has been derived from *C. elegans*.

38. A micro-organism according to claim 37, in which said DNA sequence is a *C. elegans*-derived cDNA or cDNA fragment.

39. A micro-organism according to claim 30, wherein the micro-organism is a bacterium.

40. A micro-organism according to claim 39, wherein said bacterium is *E. coli*.

41. A micro-organism according to claim 40, wherein said *E.coli* is a RNAse III negative strain.

42. A library of *C. elegans* cDNA or *C. elegans* cDNA fragments, said library having been transformed into a micro-organism by a method comprising:

(a) inserting cDNA(s) or cDNA fragment(s) from said *C. elegans* cDNA library into a cloning site of an expression vector, in which said expression vector comprises a promoter or promoters oriented relative to said cloning site such that the promoter or promoters initiate transcription of said cDNA or cDNA fragment inserted in said cloning site to double stranded RNA upon binding of a transcription factor to said promoter or promoters;

(b) transforming the micro-organism with the expression vectors having the cDNA(s) or cDNA fragment(s) inserted therein.

43. A library according to claim 42, in which said expression vector comprises two identical promoters flanking said cDNA or cDNA fragment.

44. A library according to claim 42, in which said expression vector comprises said cDNA or cDNA fragment in a sense and an antisense orientation relative to said promoter or promoters.

45. A library to according to claim 42, in which said transcription factor is a phage polymerase.

46. A library according to claim 45, in which said promoter(s) is/are selected from the group consisting of T7, T3 and SP6 promoter(s).

47. A library according to claim 42, in which said micro-organism is adapted to express said transcription factor.

48. A library according to claim 47, in which said transcription factor is T7 polymerase.

49. A library according to claim 42, in which the micro-organism is a bacterium.

50. A library according to claim 49, in which the bacterium is *E.coli*.

51. A library according to claim 50, in which the *E. coli* is a RNAse III negative strain.

52. A library according to claim 42, which is organised into hierarchical pools.

53. A method for expressing double stranded RNA in *C. elegans*, comprising feeding *C. elegans* a library according to any of claims 42, 50 and 51.